

In the Claims

The following is an amendment to and a complete listing of the claims which replaces all prior listings of claims in this application.

1. (currently amended) ~~Process~~ A process for controlling an electronic power component comprising a piloting process for piloting ~~[[the]]~~ an opening ~~and/or closure and a closing~~ of the electronic power component, ~~[[the]]~~ said piloting process ~~comprising~~ having a plurality of steps for controlling ~~[[the]]~~ an application of a succession of different commutation voltages on a control electrode of ~~[[said]]~~ the electronic power component between ~~[[the]]~~ an instant when ~~[[the]]~~ said piloting process begins and ~~[[the]]~~ an instant when either the opening ~~and/or closure and the closing~~ of the electronic power component ~~must stop should be completed~~, ~~[[the]]~~ wherein passage from one ~~[[step]]~~ commutation voltage to ~~[[the]]~~ a following step successive commutation voltage in ~~[[this]]~~ said piloting process ~~[[being]]~~ is effected automatically as soon as a corresponding condition of passage is satisfied, said piloting process including the steps of ~~wherein it comprises the steps consisting~~ in:

[[-]] reading [[the]] a value of at least one operational parameter characteristic of [[the]] a reaction of the electronic power component in response to ~~the successive application of said~~ a commutation ~~voltages~~ voltage,

[[-]] verifying, ~~thanks to~~ based on the values read, whether [[this]] the reaction of the electronic power component to the commutation voltage is produced [[in]] within a predetermined ~~imparted~~ time for the commutation voltage,

[[-]] if [[so]] the reaction of the electronic power component is produced within the predetermined time for the commutation voltage, allowing said piloting process to continue to a successive commutation voltage ~~normally~~, and

[[-]] if [[not]] the reaction of the electronic power component is not produced within the predetermined time for the commutation voltage, interrupting said piloting process and ~~immediately~~ triggering off a process for safeguarding the integrity of the electronic power component.

2. (currently amended) The process of Claim 1, wherein at least one condition of passage from ~~one step~~ the commutation voltage to the successive commutation voltage ~~following~~ in said piloting process is a function of the ~~values~~ value read for said at least one operational parameter, ~~and, in order to verify~~

verifying whether the reaction of the electronic power component to the commutation voltage is produced ~~[[in]]~~ within the predetermined ~~imparted~~ time for the commutation voltage, the process includes ~~comprises the step consisting in~~ verifying that said at least ~~[[this]]~~ one condition of passage is satisfied before ~~[[the]]~~ said predetermined ~~imparted~~ time for the commutation voltage has elapsed.

3. (currently amended) The process of Claim 2, wherein ~~[[the]]~~ said piloting process ~~comprises the step consisting in~~ further includes the step of verifying that ~~all the conditions~~ every condition of passage between each commutation voltage of said succession of different commutation voltages ~~said plurality of steps~~ of said piloting process ~~[[are]]~~ is satisfied before a predetermined ~~imparted~~ time common to ~~all these conditions~~ every condition of passage has elapsed.

4. (currently amended) The process of Claim 3, wherein ~~the common~~ said predetermined time common to every condition of passage is counted from the instant when ~~the execution of~~ said piloting process begins~~[[,]]~~ and ~~this common time~~ is representative of a maximum time to effect commutation of the electronic power component.

5. (currently amended) The process of Claim 1, wherein said at least one of the operational parameters read parameter is ~~[[the]]~~ a voltage between ~~[[the]]~~ a collector electrode and an emitter ~~electrodes~~ electrode of the electronic power component.

6. (currently amended) The process of Claim 1, wherein said at least one of the operational parameters read parameter is ~~[[the]]~~ a voltage on the control electrode of the electronic power component.

7. (currently amended) The process of Claim 1, wherein ~~one of the steps of~~ said piloting process ~~consists in~~ further includes the step of controlling an ~~[[the]]~~ application on ~~[[said]]~~ the control electrode of a braking voltage adapted to brake commutation of the electronic power component.

8. (currently amended) The process of Claim 7, wherein ~~the value of the~~ said braking voltage has a value that is strictly included between ~~[[the]]~~ values of ~~[[the]]~~ voltages for maintaining the electronic power component ~~respectively~~ in ~~[[the]]~~ a closed state and in ~~[[the]]~~ an open state.

9. (currently amended) The process of Claim 7, wherein said

piloting process is a process for piloting the closure of the electronic power component, and wherein ~~[[the]]~~ a condition of passage between the step of controlling the application of ~~[[a]]~~ said braking voltage and ~~[[the]]~~ a following step is satisfied if ~~[[the]]~~ a voltage between ~~[[the]]~~ a collector electrode and an emitter ~~electrodes~~ electrode of the electronic power component is less than a first predetermined threshold.

10. (currently amended) The process of Claim 9, wherein said piloting ~~[[the]]~~ process ~~for piloting the closure of the electronic power component~~ begins ~~[[by]]~~ with the step of controlling the application of ~~[[the]]~~ said braking voltage.

11. (currently amended) The process of Claim 7, wherein said piloting process is a process for piloting the opening of the electronic power component, and wherein a ~~[[the]]~~ condition of passage between a preceding step and the step of controlling the application of ~~[[the]]~~ said braking voltage is satisfied if ~~[[the]]~~ a voltage between ~~[[the]]~~ a collector electrode and an emitter ~~electrodes~~ electrode of the electronic power component is higher than a second predetermined threshold.

12. (currently amended) The process of Claim 11, wherein ~~the~~

~~value of the~~ said second predetermined threshold has a value that corresponds to half of a ~~[[the]]~~ voltage to be commuted.

13. (currently amended) The process of Claim 11, wherein ~~[[said]]~~ the preceding step before the step of controlling the application of said braking voltage is a step for controlling ~~[[the]]~~ an application of a voltage ~~[[of]]~~ having a value ~~strictly~~ lower than ~~[[that]]~~ a value of ~~[[the]]~~ said braking voltage.

14. (currently amended) The process of Claim 11, wherein, ~~in the process for piloting the opening of the electronic power component, the~~ a condition of passage between the step of controlling the application of ~~[[the]]~~ said braking voltage and a following step is satisfied if the voltage between the collector electrode and the emitter electrodes electrode of the electronic power component attains a maximum.

15. (currently amended) ~~System~~ A system for controlling an electronic power component, said system is adapted to execute a piloting process for piloting ~~[[the]]~~ an opening ~~and/or closure~~ and a closing of ~~[[this]]~~ the electronic power component, said piloting process ~~containing~~ having a plurality of steps for

controlling ~~[[the]]~~ an application of a succession of different commutation voltages on a control electrode of the electronic power component between ~~[[the]]~~ an instant when said piloting process ~~starts~~ begins and ~~[[the]]~~ an instant when either the opening ~~and/or closure~~ and the closing of the electronic power component should be completed ~~must finish~~, wherein ~~[[the]]~~ passage from one ~~[[step]]~~ commutation voltage to a successive commutation voltage ~~the following step~~ in ~~[[this]]~~ said piloting process ~~[[being]]~~ is automatically effected as soon as a corresponding condition of passage is satisfied, said ~~wherein the~~ system ~~comprises~~ comprising:

a computer connecting to a piloting unit for supplying the succession of different commutation voltages to the electronic power component, ~~adapted to~~

~~[[-]]~~ means for reading a ~~read the~~ value of at least one operational parameter characteristic of ~~[[the]]~~ a reaction of the electronic power component in response to ~~the successive application of said a commutation voltages~~ voltage and for inputting the value to said computer,

~~[[-]]~~ wherein said computer includes means for verifying ~~verify~~, ~~thanks to~~ based on the input of the value to the computer ~~values read~~, whether ~~[[this]]~~ the reaction of the electronic power component to the commutation voltage is produced

[[in]] within a predetermined ~~imparted~~ time for the commutation voltage,

[[(-)] and if [[so]] the reaction of the electronic power component is produced within the predetermined time for the commutation voltage, then permitting [[allow]] said piloting process to continue to a successive commutation voltage normally, and

[[(-)] if the reaction of the electronic power component is not produced within the predetermined time for the commutation voltage, then interrupting ~~interrupt~~ said piloting unit to process and immediately trigger off a process for safeguarding [[the]] an integrity of the electronic power component.

16. (currently amended) The system of Claim 15, wherein at least one condition of passage from one [[step]] commutation voltage of said piloting process to a successive commutation voltage ~~the following~~ is a function of the values read for said at least one operational parameter, and wherein said computer further includes means for verifying, ~~in order to verify whether the reaction of the electronic power component is produced in the predetermined imparted time, the computer is adapted to verify that~~ said at least one condition of passage is satisfied before [[a]] the predetermined time for the commutation voltage imparted

~~for this condition of passage~~ has elapsed to verify whether the reaction of the electronic power component to the commutation voltage is produced within the predetermined time for the commutation voltage.

17. (currently amended) The system of Claim 16, wherein ~~[[the]]~~ said computer further includes means for verifying ~~is adapted to verify that all the conditions~~ every condition of passage between each commutation voltage of said succession of different commutation voltages ~~plurality of steps~~ of said piloting process ~~[[are]]~~ is satisfied before a predetermined ~~imparted~~ time common to ~~all these conditions~~ every condition of passage has elapsed.

18. (currently amended) ~~[[Data]]~~ The system of Claim 15, further comprising a data recording support comprising having instructions adapted to be executed by the computer for the execution of the steps of the to execute said piloting process for controlling an electronic power component of Claim 1, when said instructions are executed by a computer.